

Application No.: 10/633,887
Response dated 11 December 2006
Reply to Office Action of September 11, 2006

132497-1

Amendments to the Claims:

This listing of claims will replace all prior versions and listings of claims in the Application.

Listing of Claims:

1. (Currently Amended) An organic-based aluminizing composition, comprising aluminum flakes, ~~an~~ aluminum-based powder particles, at least one silicone resin; and at least one organic solvent selected from the group consisting of alcohols, glycols, ketones, aldehydes, aromatic compounds, dimethylformamide, mineral spirits; naphtha, nitrated hydrocarbons, chlorinated hydrocarbons, and mixtures of any of the foregoing.

2. (Cancelled)

3. (Original) The composition of claim 1, wherein the aluminum powder comprises substantially spherical powder particles.

4. (Original) The composition of claim 3, wherein the substantially spherical powder particles have an average particle size in the range of about 0.5 micron to about 200 microns.

5. (Original) The composition of claim 4, wherein the powder particles have an average particle size in the range of about 1 micron to about 50 microns.

6. (Cancelled)

7. (Canceled)

8. (Previously Presented) The composition of claim 41, wherein the epoxy resin comprises bisphenol A.

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9. (Previously Presented) The composition of claim 1, wherein the silicone resin comprises a modified or unmodified silicone varnish.

10. (Previously Presented) The composition of claim 1, wherein the silicone resin comprises at least one organopolysiloxane.

11. (Previously Presented) The composition of claim 1, wherein the silicone resin comprises a silicone alkyd, a silicone epoxy, or a silicone polyester.

12. (Cancelled)

13. (Previously Presented) The composition of claim 1, wherein the amount of aluminum in the composition is in the range of about 0.5% by weight to about 45% by weight.

14. (Cancelled)

15. (Original) The composition of claim 1, wherein the aluminum-based powder further comprises at least one metal selected from the group consisting of platinum group metals, rare earth metals, scandium, yttrium, iron, chromium, and cobalt.

16. (Original) The composition of claim 1, substantially free of hexavalent chromium.

17. (Original) The composition of claim 1, containing less than about 10% by weight of phosphoric acid and phosphoric acid derivatives, based on the weight of the entire composition.

18. (Cancelled)

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19. (Original) The composition of claim 1, further comprising at least one material selected from the group consisting of pigments, diluents, curing agents, deflocculants, dispersants, anti-settling agents, surfactants, anti-foam agents, driers, extenders, and lubricants.

20. (Previously Presented) An organic-based aluminizing composition for providing aluminum to the surface region of a turbine component formed from a material comprising a nickel-based superalloy, wherein the composition is substantially free of hexavalent chromium, and comprises aluminum flakes, an aluminum-based powder, at least one silicone resin; and at least one organic solvent selected from the group consisting of alcohols, glycols, ketones, aldehydes, aromatic compounds, dimethylformamide, mineral spirits; naphtha, nitrated hydrocarbons, chlorinated hydrocarbons, and mixtures of any of the foregoing.

21. (Previously Presented) The aluminizing composition of claim 20, wherein the aluminum powder comprises substantially spherical powder particles having an average particle size in the range of about 1 micron to about 50 microns.

Claims 22-32 (Cancelled)

Claims 33-36 (Cancelled)

37. (Previously Presented) A metal substrate, having an organic-based aluminizing composition disposed on its surface, said composition being substantially free of hexavalent chromium, and comprising aluminum flakes, an aluminum-based powder, at least one silicone resin, and at least one organic solvent selected from the group consisting of alcohols, glycols, ketones, aldehydes, aromatic compounds, dimethylformamide, mineral spirits; naphtha, nitrated hydrocarbons, chlorinated hydrocarbons, and mixtures of any of the foregoing.

38. (Cancelled)

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39. (Original) The metal substrate of claim 37, in the form of a turbine engine component which comprises a nickel-based superalloy.

40. (Cancelled)

41. (Previously Presented) An organic-based aluminizing composition, comprising an aluminum-based powder and at least one epoxy resin, wherein the powder comprises an alloy of aluminum and silicon.

42. (Previously Presented) A metal substrate, having the aluminizing composition of claim 41 disposed on at least a portion of its surface.

43. (Previously Presented) The metal substrate of claim 42, in the form of a turbine engine component.

44. (Previously Presented) The composition of claim 1, wherein the aluminum-based powder comprises an alloy of aluminum and silicon.